REMARKS

Claim 12 has been amended and claims 16-28 have been added based on the disclosure at, e.g., page 38, last line to page 39, line 20, page 40, line 25 to page 41, line 4, and page 42, lines 2-5 and 12-19.

Entry of the above amendments is respectfully requested.

PRELIMINARY MATTER

On review of the PTO/SB/08 A & B (modified) form attached to the Office Action of May 2, 2003, Applicant notes that the Examiner has not initialed the citation for U.S. Patent 3,836,541. Accordingly, Applicant respectfully requests that the Examiner consider this citation and return a new initialed copy of the PTO/SB/08 A & B (modified) form with the next communication from the PTO. For the Examiner's convenience, a copy of the form at issue is attached hereto.

CLAIMS 10 AND 12 REJECTED UNDER 35 U.S.C. § 112, ¶ 2

Claims 10 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

A. Examiner's Position

The Examiner states that claims 10 and 12 are incomplete because they omit essential elements. It is asserted that claims 10 and 12 recite a process for making compound of formula 2 but do not recite how the compound is made from the second intermediate.

B. Applicant's Response

In response, Applicant has canceled claim 10 and amended claim 12 to obviate this rejection. Namely, claim 12 has been amended to recite reacting the second intermediate with an alkylating agent represented by one of the formulas (11) and (12) to prepare the isothiocyanatoformic acid ester product.

Accordingly, Applicant submits that the present claims satisfy the requirements of 35 U.S.C. 112, second paragraph, and thus withdrawal of this rejection is respectfully requested.

CLAIMS 10 AND 12 REJECTED UNDER 35 U.S.C. § 112, ¶ 1

Claims 10 and 12 are rejected under 35 U.S.C. 112, first paragraph, as allegedly not enabled by the specification.

A. Examiner's Position

The Examiner states that the specification, while being enabling for compound of formula 8 wherein O-R^6 is a tetrahydrogeraniol group, does not reasonably provide enablement for the genus of compounds generically embraced in the claims when instant R^6 is unsubstituted or a substituted alkyl of at least 3 carbon atoms or an unsubstituted or substituted aryl.

B. Applicant's Response

In response, Applicant has canceled claim 10 and amended claim 12 to obviate this rejection. In this regard, Applicant notes that claim 12 has been amended to delete a substituted or non-substituted aryl group from the recitation for R^6.

Accordingly, Applicant submits that the present claims satisfy the requirements of 35 U.S.C. 112, first paragraph, and thus withdrawal of this rejection is respectfully requested.

CLAIMS 10 AND 12 REJECTED UNDER 35 U.S.C. § 103

Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takiguchi et al. JP 50 14631 in view of Fu et al. US 4,659,853 for reasons of record.

A. Examiner's Position

The Examiner's basic position is set forth in detail in the Office Action and will not be repeated here for purposes of brevity.

In response to the arguments presented previously, the Examiner maintains that the combined teachings of the references include Applicant's claimed process of making isothiocyanatoformic ester. The Examiner states that the claimed method isolates the product of formula 8 as a salt and subsequently neutralizes the product to yield the compound of formula 8. The isolation of an intermediate or purification of an intermediate is not deemed by the Examiner to be a patentably distinct inventive process.

The Examiner states that the comparative example provided on pages 52-54 of the specification is not a proper comparison to the cited references. First, the Examiner states that it is not clear what prior art process is being compared. The Examiner indicates that if the purity of the final product is the patentable improvement and the claimed method yields unexpectedly superior results, then the proper comparison would be between the method in Takiguchi wherein hydroxide is used for the alkylation process, not carbonate as done in the comparative example.

The Examiner also states that the novelty of Applicants' invention is the isolation of the second intermediate for improved purity. Thus, the Examiner states that the appropriate comparison for a showing of unexpected results should be with the product of Fu which adopts conventional purification, as compared to the claimed process of formula 8 wherein salt formation and subsequent neutralization is used for purity improvement.

In addition, the Examiner indicates that Applicant has not provided any examples or experimental data showing that it is not possible to isolate the salt of the compound of formula 8 when R^6 is ethyl or methyl. The Examiner asserts that Applicants' species 2-4 and 2-6 are methyl and ethyl compounds and therefore, according to Applicant's assertion, they are not supposed to yield crystalline salt of product 8.

Also, the Examiner disagrees that Takiguchi teaches only "lower alkyl" limited to limited to methyl and ethyl only. The Examiner states that one trained in the art would regard lower alkyl as a C_1-C_6 alkyl, and the fact that Takiguchi exemplifies methyl and ethyl does not alter the definition of the term.

Further, the Examiner states that Takiguchi discloses a species with a benzyl group which would allegedly correspond to substituted alkyl and is the same Applicants' Example 2-31. The Examiner also states that Takiguchi discloses alkenyl groups and exemplifies allyl-bearing species, which would fall within Applicants' claimed carbon atom requirement of 3 or more.

B. Applicant's Response

Applicant respectfully submits that the present invention is not obvious over Takiguchi in view of Fu, and requests that the Examiner reconsider and withdraw this rejection in view of the following remarks.

In item 1 of paragraph 4 of the Action, the Examiner states that the isolation of an intermediate, or purification of an intermediate, is not deemed to be a patentably distinct inventive process, as one trained in the art would know how to do so. In this context, Applicant submits that the Examiner appears to be under a misapprehension that step [1] of the present invention is within the scope of the disclosure of Fu.

Applicant would accordingly like to emphasize that the process described in Fu is different from step [1] of the present invention. Specifically, in step [1] of the present invention, the isothiocyanic acid salt (5) and the hydroxyl derivative (6) are first mixed to react with each other, and the chloroformic acid derivative (7) is then added to obtain (8). In contrast, the process of Fu teaches that MSCN, which corresponds to the isothiocyanic acid salt (5) of the present invention, and ROC(=O)X, which corresponds to the chloroformic acid derivative (7), are first mixed to react with each other, and that R^1YH, which corresponds to the hydroxy derivative (6) of the present invention, is then added.

The Examiner also makes a comparison between an example of the present invention and an example of Fu that further adopts a conventional purification. In this regard, Applicant wishes to draw to the attention of the Examiner to the fact that, in order to compare the effects of step [1] of the present invention and the process of Fu, the inventor of the present invention has

attempted to conduct Examples 1 and 4 as described in the specification of Fu. However, since significant amounts of ClCOOEt remained unreacted even after the reaction periods of time disclosed in Fu's specification had expired (unreacted ClCOOEt: intermediate reaction product EtOOCNCS = 3:1 in Example 1, and ClCOOEt: EtOOCNCS = 1:1, in Example 4, both as measured by gas chromatography), a meaningful comparison between step [1] of the present invention and the process of Fu was in practice impossible.

Step [1] of the present invention has the merit of providing a reaction mixture containing the desired product, the intermediate compound (8), of a yield and purity high enough to be directly applicable to the following steps [2] and [3]. In contrast, in the case of Fu, the results of Examples 1 and 4 indicate that a substantial amount of ROC(=O)X is left unreacted in a reaction mixture, and that, as is evident from the second scheme in column 2 of the specification, the process of Fu has the disadvantage of not being able to provide an adequate yield and purity of the desired product.

Since the differences between the present invention and Fu in terms of procedures and effects have thus been clarified, Applicant believes that in the examination of the present application it is not necessary to produce additional experimental data comparing the effects of Takiguchi with steps [2] and [3] of the present invention.

In item 2 of paragraph 4 of the Action, the Examiner also states that the Applicant asserts that the salt of the intermediate compound (8) cannot be obtained as crystal when R^6 is ethyl or methyl. Here again, the Examiner's comment is apparently based on a simple misunderstanding of Applicant's argument.

In this regard, Applicant wishes to draw to the attention of the Examiner to the fact that, in the response to the last Action, Applicant did **not** state that the salt of the intermediate compound (8) is not obtained as crystal when R^6 is ethyl or methyl. Rather, because of the lack of efficiency in obtaining the desired products caused by difficulties in the final purifying step, Applicant's argument was, and remains, that a conventional method, namely, the method of Takiguchi, **can not be practically applied when the desired final product, namely, the salt of the intermediate compound (8) has, as R^6, 3 or more of carbon atoms.**

Precisely in order to solve the problem of low yield caused by difficulties in the final purifying step, the present invention provides a step that includes obtaining the intermediate compound (10), namely, step [2]. It should incidentally also be understood that, although the present application does not specifically seek to claim the case when R^6 is ethyl or methyl, the method of the present invention **could** be applied when R^6 is ethyl or methyl. Accordingly, the disclosure of the species 2-4 and 2-6 on page 25 does not in any way affect the patentability of the present invention.

Further, in item 3 of paragraph 4 of the Action, the Examiner states that Applicant asserts that Takiguchi teaches "lower alkyl" being limited to methyl and ethyl only. It appears that this comment of the Examiner too is based on a simple misunderstanding of Applicant's argument.

In this regard, Applicant wishes to stress to the Examiner that, in the response to the last Action, Applicant did not seek to persuade the Examiner with biased opinions such as "lower alkyl" generally means alkyl having 1 or 2 carbon atoms". Rather, Applicant informed the Examiner of **a fact obtained by experimental observations,** namely, the fact that Takiguchi

cannot **in practice** produce satisfactory results when the salt of the intermediate compound (8), which has 3 or more carbon atoms, is used as R^6, since the resultant compound (2), having 3 or more carbon atoms as R^6, tends to be in oil form (see page 3, lines 10-16 in the present application), and that purification thereof is thus difficult.

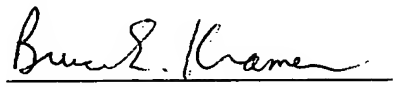
Therefore, Applicants submit that the present invention is not obvious over Takiguchi in view of Fu, and withdrawal of this rejection is respectfully requested.

CONCLUSION

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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PTO/SB/08 A & B (modified)

Substitute for form 1449 A & B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet	1	of	1

Complete if Known	
Application Number	NOT YET ASSIGNED
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Filing Date	February 13, 2002
First Named Inventor	Tetsunori MATSUSHITA
Art Unit	NOT YET ASSIGNED
Examiner Name	NOT YET ASSIGNED
Attorney Docket Number	Q68466

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number: Number	Document Number: Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		US 3,836,541		9/17/74	Johnson et al.
		US			
		US			
		US			
		US			
		US			
		US			
		US			
		US			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document: Country Code[3]	Foreign Patent Document: Number[4]	Foreign Patent Document: Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation[6]
VB		JP	10-316654		12/2/1998		
VB		JP	2001-130144		5/15/2001		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation[6]
VB		Syntheses; H. Wamhoff, et al.; "HETEROCYCLISCHE β-ENAMINOESTER; 18 [1]. ZUR SYNTHESE VON 2-AMINOPYRROL-3CARBONSAURE-DERIVATEN'; January 1976; p. 51	
VB		J.C.S. Perkin; P.R. Atkins, et al.; "HETEROCYCLIC SYNTHESES WITH ISOTHIOCYANATOFORMIC ESTERS AND THEIR DERIVATIVES"; (1973)	

Examiner Signature	V. Balasubramanian	Date Considered	6/1/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Applicant's unique citation designation number (optional). [2]See Kinds Codes of USPTO Patent Documents at www.uspto.gov, MPEP 901.04 or in the comment box of this document. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to indicate here if English language Translation is attached.